



TuffFlow SP 3002

Water Reducing Plasticizer/Retarder for Concrete.

Uses

- To improve the effectiveness of the water content of a concrete mix.
- At higher dosages to provide cost effective means of reducing concrete permeability and thereby reducing water penetration.
- Hot weather concreting.

Typical Applications & Advantages

- Ready mix concrete where workability retention coupled with retardation of initial set is beneficial.
- Water reduction significantly improves compressive strength at all ages.
- Enhances durability through the production of low permeability concrete.
- Reduces placing problems in hot weather concreting by improving workability and workability retention.
- Chloride free, safe for use in prestressed and reinforced concrete.
- Allows workability to be increased without adding extra water.

Standards Compliance

TuffFlow SP 3002 complies with the requirements of the following standards:
ASTM C494 Types D & Type G depending on dosage used.

Product Description

TuffFlow SP 3002 is a chloride free and water-reducing admixture based on selected sugar-reduced lignosulphonate materials. It is supplied as a dark brown liquid, which instantly disperses in water. **TuffFlow SP 3002** disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively and improving the consistency of the concrete. This produces higher levels of workability for the same water content, allowing benefits such as water reduction and increased strengths to be taken. These acts efficiently on the cement particles by combining the effects of powerful plasticizing and deflocculating agents

Typical Properties

| | |
|-------------------------|---------------------|
| Appearance | : Dark Brown liquid |
| Specific gravity | : 1.18 @ 25±2°C |

Technical Support

GIC provides a comprehensive technical support service to specifiers, end users, and contractors and is able to offer on-site technical assistance

Instructions for Use

Compatibility

TuffFlow SP 3002 can be used for all types of Portland cement and for use with any other special cements contact GIC.

Dosage

The optimum dosage of **TuffFlow SP 3002** to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. The normal dosage range is between 0.4 to 1.4 litres/100 kg of cementitious material.

Dosages outside the normal range quoted above can be used to meet particular mix requirements. Contact GIC for advice in these cases.

Setting

TuffFlow SP 3002 acts efficiently to give controlled retardation of initial set. Setting times of concrete mixes are related to cement type and ambient temperature.

Effects of Over Dosage

A severe over dosage of **TuffFlow SP 3002** will result in the following:

- Retardation of initial and final set.
- Slight increase in air entrainment.
- Increase in workability.

Provided it is properly cured, the ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete. The retarding effects of very high dosage will be exaggerated with SR cement.

Packaging & Storage

TuffFlow SP 3002 is supplied in 20litre & 210 litre drums. For site installations, deliveries will





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be made in bulk to site storage tanks. **TuffFlow SP 3002** has a minimum shelf life of 12 months provided it is stored under cover, out of direct sunlight.

Health & Safety Precautions

TuffFlow SP 3002 does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to be exposed to skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

For further information, refer to the Material Safety Data Sheet available for this product.

Important note

GIC endeavors to ensure that the technical information contained herein is true, accurate and represents our best knowledge and experience. No warranty is given or implied, as GIC has no control over the conditions of use and the competence of any labor involved in the application are beyond our control.

As all GIC technical data, sheets are updated on a regular basis it is the customer's responsibility to check that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended.

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